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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,463	01/26/2001	Alex Krister Raith	4015-841	6203

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RALEIGH, NC 27602

EXAMINER

CONTEE, JOY KIMBERLY

ART UNIT	PAPER NUMBER
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2686

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DATE MAILED: 05/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/771,463

Applicant(s)

RAITH, ALEX KRISTER

Examiner

Joy K Contee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,8,9,13,14,17,23,25-28,31,32,39 and 45 is/are rejected.
- 7) ☒ Claim(s) 5-7,10-12,15,16,18-22,24,29,30,33,35-38 and 40-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-4,8,9,13,14,17,23,25-28,31,32,39 and 45 filed February 4, 2004 have been fully considered but they are not persuasive. Applicant argues that Hashimoto (GB2339649) fails to teach a "reference location associated with said base unit". Examiner disagrees. Hashimoto's base station identification numbers anticipate Applicant's claimed "reference location". Applicant does not claim GPS coordinates as the "reference location". The base station identification numbers in Hashimoto serve as references for the location of the base station. Hashimoto clearly teaches that said identification numbers are used to judge whether or not the mobile is one system or the other based on previously stored base station identification numbers (see page 30, line 12- page 33, line 15).

Applicant also believes that Hashimoto fails to disclose "a positioning receiver to compute a current location of said mobile terminal". Examiner also disagrees. Hashimoto discloses that a determination is made as to whether or not the mobile exists at a location A or B (see Fig. 1). Applicant suggests that Hashimoto's distance detection of the mobile's movement between a location A and B is not relevant. However, the distance detector anticipates that knowledge of a current location of the mobile is determined based on detected distance values and predetermined values (see page 19, lines 10-23).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4,8,9,13,14,17,23,25-28,31,32,39 and 45 are rejected under 35 U.S.C. 102(e) as being anticipated by Hashimoto, GB 2339649.

Regarding claim 1, Hashimoto discloses a method implemented in a mobile terminal for establishing communications with a base unit in a cordless phone system, said method comprising:

storing a reference location (i.e., base station number of the independent system stored in advance in the registration system storage section) associated with said base unit in said mobile terminal (p. 27, lines 25 to p. 28, line 5 and p. 37, lines 7-15);

determining a current location (i.e., the number searching section searches the control signal received by the receiving unit and judges whether or not a base station number of the independent system or outdoor public system is included in the control signal, thus determining whether or not mobile is inside or outside area A or B, see Fig. 1) of said mobile terminal (p. 28, line 27 to p. 30, line 17);

computing a distance between said current location of said mobile terminal and said base unit (p. 11 15-19 and p. 19, lines 10-23);

conducting a search (i.e., number searching) for said base unit to establish communication with said base unit (p. 43, lines 11-27); and

controlling searching for said base unit based on said distance between said current location of said mobile terminal and said base unit by varying a search behavior of said mobile terminal dependent upon said distance between said current location of said mobile terminal and said base unit (p. 46, lines 5-17 and p. 49, lines 9-12).

Regarding claim 2, Hashimoto discloses the method of claim 1 wherein varying search behavior of said mobile terminal dependent upon said distance between said current location of said mobile terminal and said base unit comprises varying the frequency (i.e., reads on prior art wherein it is inherent that the control signals from the independent system base station and a plurality of public system base stations are transmitted at different frequencies) of said search (p. 8, lines 4-11).

Regarding claim 3, Hashimoto discloses the method of claim 1, wherein varying a search behavior of said mobile terminal dependent upon said distance between said current location of said mobile terminal and said base unit comprises varying the duration of said search (p. 11, lines 10-19).

Regarding claim 4, Hashimoto discloses the method of claim 1, wherein storing a reference location associated with said base unit comprises: determining the current location of said mobile terminal when communication with said base unit is established (i.e., the number searching section searches the control signal received by the receiving

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unit and judges whether or not a base station number of the independent system or outdoor public system is included in the control signal, thus determining whether or not mobile is inside or outside area A or B, see Fig. 1) (p. 28, line 27 to p. 30, line 17); and storing said current location of said mobile terminal when communication with said base unit is established as said reference location (i.e., base station number of the independent system stored in advance in the registration system storage section) (p. 27, lines 25 to p. 28, line 5 and p. 37, lines 7-15).

Regarding claim 8, Hashimoto discloses the method of claim 1 further comprising updating said reference location stored in said mobile terminal following a change in said reference location (p. 39, line 25 – p. 40, line 22).

Regarding claim 9, Hashimoto discloses the method of claim 8 wherein updating said reference location stored in said mobile terminal following a change in said reference location comprises: determining the current location of said mobile terminal when communication with said base unit is established (p. 38, line 25 to p. 39, line 11); comparing said current location of said mobile terminal to said stored reference location to detect a change in said reference location (p. 40, lines 5-11); and if a change in said reference location is detected, storing said current location in said mobile terminal as an updated reference location (p. 39, line 25 – p. 40, line 22).

Regarding claim 13, Hashimoto discloses the method of claim 1 wherein controlling searching for said base unit based on said distance between said current location of said mobile terminal and said base unit comprises determining a threshold (i.e., search control section counts up a count value of the counter unit and if the count

value exceeds 60 the number searching section carries out the judging operation) for varying said search behavior (p. 34, lines 3-27).

Regarding claim 14, Hashimoto provides evidence of the method of claim 13 wherein determining said threshold comprises defining a boundary of a home area containing said reference location, wherein said boundary serves as said predetermined threshold (see background art description, p. 7, lines 14-20).

Regarding claim 17, Hashimoto discloses the method of claim 1 further comprising determining an inherent position update frequency (i.e., since the frequency differs between the independent and public systems) based on said distance between said current location of said mobile terminal and said reference location (p. 8, lines 4-11 and p. 11, lines 10-19).

Regarding claim 23, Hashimoto discloses the method of claim 1 further comprising updating said current position (i.e., reads on changing the period, depending on location of mobile station) of said mobile terminal when communication with said base unit is established (i.e., mobile station belongs to a specific region) (p. 12, lines 15-22).

Regarding claim 25, Hashimoto discloses a dual function mobile terminal compatible with a cordless phone system comprising:

a positioning receiver (i.e., reads on receiving unit 3 which receives the control signal from the base unit) to compute a current location of said mobile terminal (p 28, line 27 to p 29, line 5) ;

inherently, a short-range RF interface to communicate with a base unit in said cordless phone system when said mobile terminal is within the range of said base unit (i.e., reads on inside area of independent system) and to search for said base unit when said mobile terminal is out of range (i.e., reads on outside of independent system, inside area of outdoor public system) said base unit (p 30, line 12 - p 34, line 2);

a processor (i.e., reads on combination of comparing, detecting and judging means) to compute the distance between said current location of said mobile terminal and a stored reference location for said base unit and to control a search behavior of said short-range interface based on said computed distance (p 11 15-19 and p 19, lines 10-23).

Regarding claim 26, Hashimoto discloses the mobile terminal of claim 25 wherein said short-range RF interface periodically searches for said base unit with a predetermined search frequency (i.e., reads on the inherent nature of the independent system having a different frequency than that of the outdoor public system) (p 8, lines 4-11).

Regarding claim 27, Hashimoto discloses the mobile terminal of claim 26 wherein said processor (i.e., reads on combination of comparing, detecting and judging means) controls said search behavior of said RF interface by varying said search frequency based on said distance between said current location of said mobile terminal and said base unit (p 19, lines 10-23).

Regarding claim 28, Hashimoto discloses the mobile terminal of claim 25 wherein said processor is programmed to store said current location as said reference location

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when said RF interface has established communication with said base unit (i.e., reads on mobile station has received control signal from base unit) (p. 29, lines 10-16).

Regarding claim 31, Hashimoto discloses the mobile terminal of claim 25 wherein said processor is programmed to update said reference location when said processor detects a change in the location of said base unit (p. 39, line 25 to p 40, line 11).

Regarding claim 32, Hashimoto discloses the mobile terminal of claim 31 wherein said processor detects a change in the location of said base unit by determining said current location of said mobile terminal upon mating (i.e., reads on registration or communication) with said base unit and comparing said current location upon mating with said base unit to a previously-stored reference location for said base unit (p. 39, line 25 to p 40, line 11).

Regarding claim 39, Hashimoto discloses the mobile terminal of claim 25 wherein said processor determines inherent position update frequency (i.e., since the frequency differs between the independent and public systems) based on said distance between said current location of said mobile terminal and said reference location (p. 8, lines 4-11 and p. 11, lines 10-19).

Regarding claim 45, Hashimoto discloses a system to permit communication of a wireless mobile terminal with the public switched telephone network comprising:

a public land mobile network (i.e., reads on outdoor public system) (p 28, lines 9-12) ;

a private cordless base unit connected to the public switched telephone network in the same manner as a conventional corded telephone (i.e., reads on independent system) (p 28, lines 9-12);

a mobile terminal comprising:

a positioning receiver (i.e., reads on receiving unit 3 which receives the control signal from the base unit) to compute a current location of said mobile terminal (p 28, line 27 to p 29, line 5) ; inherently, a short-range RF interface to communicate with a base unit in said cordless phone system when said mobile terminal is within the range of said base unit (i.e., reads on inside area of independent system) and to search for said base unit when said mobile terminal is out of range (i.e., reads on outside of independent system, inside area of outdoor public system) said base unit (p 30, line 12 - p 34, line 2)

a processor (i.e., reads on combination of comparing, detecting and judging means) to compute the distance between said current location of said mobile terminal and a stored reference location for said base unit and to control a search behavior of said short-range interface based on said computed distance (p 11 15-19 and p 19, lines 10-23).

Allowable Subject Matter

4. Claims 5-7,10-12,15-16,18-22,24,29-30,33,35-38 and 40-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in

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independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

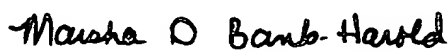
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K Contee whose telephone number is 703-308-0149. The examiner can normally be reached on 5:30 a.m. to 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 703-305-4379. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-0377.


Joy Contee

May 2, 2004


MARSHA D. BANKS-HAROLD
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